

=> FIL REG

FILE 'REGISTRY' ENTERED AT 10:01:51 ON 10 AUG 2010  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2010 American Chemical Society (ACS)

=> D HIS NOFILE

FILE 'HCAPLUS' ENTERED AT 09:14:59 ON 10 AUG 2010

E US2006-559810/APPS  
L1 1 SEA SPE=ON ABB=ON PLU=ON US2006-559810/AP  
E JP2003-163462/APPS  
L2 1 SEA SPE=ON ABB=ON PLU=ON JP2003-163462/PRN  
E WO2004-JP8243/APPS  
L3 1 SEA SPE=ON ABB=ON PLU=ON (WO2004-JP8243/AP OR WO2004-JP8  
243/PRN)  
L4 1 SEA SPE=ON ABB=ON PLU=ON (L1 OR L2 OR L3)  
SEL L4 RN

FILE 'REGISTRY' ENTERED AT 09:16:21 ON 10 AUG 2010

L5 2 SEA SPE=ON ABB=ON PLU=ON (808753-73-3/BI OR 808753-74-4/  
BI)

FILE 'HCAPLUS' ENTERED AT 09:17:30 ON 10 AUG 2010

SEL L4 AU  
L6 479 SEA SPE=ON ABB=ON PLU=ON ("FUKUDA, TERUYUKI"/AU OR  
"MAEDA, MASAHICO"/AU OR "MASUTANI, TETSUYA"/AU OR "UEDA,  
AKIHIKO"/AU)  
E DAIKIN IND/CO  
L7 7835 SEA SPE=ON ABB=ON PLU=ON ("DAIKIN IND"+ALL/CO,CS,PA OR

FILE 'LREGISTRY' ENTERED AT 09:22:50 ON 10 AUG 2010

L8 STR

FILE 'REGISTRY' ENTERED AT 09:24:40 ON 10 AUG 2010

SCR 2043  
L10 36 SEA SSS SAM L8 AND L9  
L11 670 SEA SSS FUL L8 AND L9  
SAV L11 HU810/A  
L12 STR L8  
L13 18 SEA SUB=L11 SSS SAM L12  
L14 264 SEA SUB=L11 SSS FUL L12  
SAV L14 HU810/A

FILE 'LREGISTRY' ENTERED AT 09:32:51 ON 10 AUG 2010

L15 STR

FILE 'REGISTRY' ENTERED AT 09:34:41 ON 10 AUG 2010

L16 1 SEA SUB=L14 SSS SAM L15  
L17 60 SEA SUB=L14 SSS FUL L15  
SAV L17 HU810B/A  
L18 14 SEA SPE=ON ABB=ON PLU=ON L17 AND SI/ELS

FILE 'HCAPLUS' ENTERED AT 09:56:09 ON 10 AUG 2010

L19 5 SEA SPE=ON ABB=ON PLU=ON L18  
L20 5 SEA SPE=ON ABB=ON PLU=ON L19 AND (L6 OR L7)  
L21 6489 SEA SPE=ON ABB=ON PLU=ON MASON?  
L22 56643 SEA SPE=ON ABB=ON PLU=ON STONE?

August 10, 2010

10/559,810

2

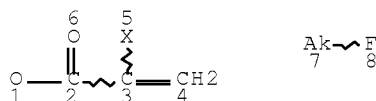
L23 43938 SEA SPE=ON ABB=ON PLU=ON BRICK?  
L24 2 SEA SPE=ON ABB=ON PLU=ON L20 AND ((L21 OR L22 OR L23))  
L25 5 SEA SPE=ON ABB=ON PLU=ON L24 OR L20

FILE 'REGISTRY' ENTERED AT 09:59:09 ON 10 AUG 2010

L26 27 SEA SPE=ON ABB=ON PLU=ON L14 AND SI/ELS  
L27 13 SEA SPE=ON ABB=ON PLU=ON L26 NOT L17

FILE 'REGISTRY' ENTERED AT 10:01:51 ON 10 AUG 2010

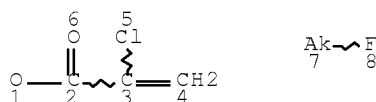
=> D L17 QUE STAT  
L8 STR



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 8

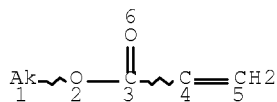
STEREO ATTRIBUTES: NONE  
L9 SCR 2043  
L11 670 SEA FILE=REGISTRY SSS FUL L8 AND L9  
L12 STR



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE  
L14 264 SEA FILE=REGISTRY SUB=L11 SSS FUL L12  
L15 STR



## NODE ATTRIBUTES:

CONNECT IS E1 RC AT 1  
DEFAULT MLEVEL IS ATOM  
GGCAT IS SAT AT 1  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 6

## STEREO ATTRIBUTES: NONE

L17 60 SEA FILE=REGISTRY SUB=L14 SSS FUL L15

100.0% PROCESSED 264 ITERATIONS

60 ANSWERS

SEARCH TIME: 00.00.01

=> FIL HCAP

FILE 'HCAPLUS' ENTERED AT 10:02:17 ON 10 AUG 2010

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2010 AMERICAN CHEMICAL SOCIETY (ACS)

=> D L25 1-5 IBIB ABS HITSTR HITIND RETABLE

L25 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1278762 HCAPLUS Full-text

DOCUMENT NUMBER: 147:503925

TITLE: Fluorine-containing acrylic polymer and siloxane  
compositions for waterproofing and stainproofing  
of masonry

INVENTOR(S): Butler, Derek; Hupfield, Peter Chesire; Reed,  
Samantha

PATENT ASSIGNEE(S): Dow Corning Corporation, USA; Daikin  
Industries, Ltd.

SOURCE: PCT Int. Appl., 29 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2007127267	A2	20071108	WO 2007-US10061	20070424
WO 2007127267	A3	20080110		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,			

PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV,  
 SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
 IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,  
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
 TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,  
 ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.:

US 2006-795604P

P 20060427

AB A composition for masonry treatment comprises (A) a fluorine-containing polymer comprising repeating units of a fluorine-containing monomer of the formula  $R_f-Y-O-C(O)-C(X)=CH_2$ , where X is F, Cl, Br, I, or a  $CFX_1X_2$  group in which  $X_1$  and  $X_2$  are each H, F, Cl, Br, I, CN, linear or branched C1-20-fluoroalkyl, substituted or unsubstituted benzyl, or substituted or unsubstituted phenyl; Y is C1-10-alkyl, C6-10-aryl or cycloalkyl, a  $-CH_2CH_2-N(R_1)SO_2-$  group in which  $R_1$  is C1-4-alkyl, or a  $-CH_2CH(OY_1)CH_2-$  group in which  $Y_1$  is H or acetyl;  $R_f$  is linear or branched C1-21-fluoroalkyl or fluoroalkenyl, or a fluoro ether group having a total of 1 to 200 repeating units selected from  $-C_3F_6O-$ ,  $-C_2F_4O-$  and  $-CF_2O-$ ; and (B) at least one siloxane of the general formula  $RaSiO(4-a/2)$ , where each R is same or different monovalent organic group. The composition is used for treating masonry to improve its stain resistance, as well as providing water and oil repellency. The composition may be dispersed in an organic solvent for application to a masonry substrate, followed by removal of the solvent.

IT 956012-02-SDP, Dimethylsilanediol-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate-titanium tetrabutoxide copolymer, reaction products with 2-butanol 956012-02-5P, Dimethylsilanediol-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate-titanium tetrabutoxide copolymer 956012-04-7P, Dimethylsilanediol-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer 956012-05-8DP, Dimethylsilanediol-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate copolymer, reaction products with 2-butanol 956012-07-0DP, Dimethylsilanediol-isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer, reaction products with 2-butanol 956012-09-2DP, Dimethylsilanediol-isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate-titanium tetrabutoxide copolymer, reaction products with 2-butanol

(comprised of actual and assumed monomers; fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)

RN 956012-02-5 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with 1-butanol titanium(4+) salt (4:1), 1,1-dimethylsilanediol, octadecyl 2-propenoate, triethoxyoctylsilane, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

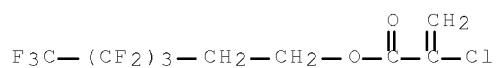
CRN 701909-41-3

August 10, 2010

10/559,810

5

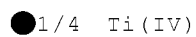
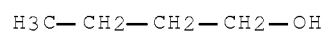
CMF C9 H6 Cl F9 O2



CM 2

CRN 5593-70-4

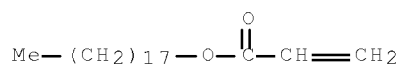
CMF C4 H10 O . 1/4 Ti



CM 3

CRN 4813-57-4

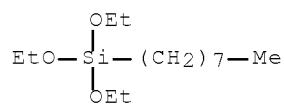
CMF C21 H40 O2



CM 4

CRN 2943-75-1

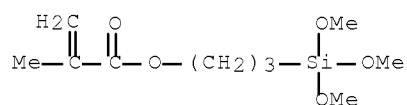
CMF C14 H32 O3 Si



CM 5

CRN 2530-85-0

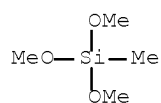
CMF C10 H20 O5 Si



CM 6

CRN 1185-55-3

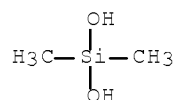
CMF C4 H12 O3 Si



CM 7

CRN 1066-42-8

CMF C2 H8 O2 Si



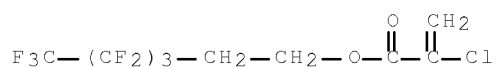
RN 956012-02-5 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with 1-butanol titanium(4+) salt (4:1), 1,1-dimethylsilanediol, octadecyl 2-propenoate, triethoxyoctylsilane, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

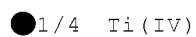
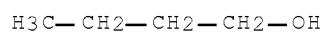
CRN 701909-41-3

CMF C9 H6 Cl F9 O2



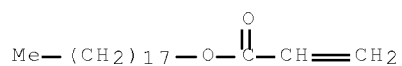
CM 2

CRN 5593-70-4  
 CMF C4 H10 O . 1/4 Ti



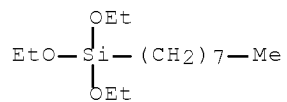
CM 3

CRN 4813-57-4  
 CMF C21 H40 O2



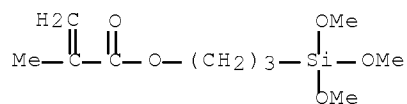
CM 4

CRN 2943-75-1  
 CMF C14 H32 O3 Si



CM 5

CRN 2530-85-0  
 CMF C10 H20 O5 Si



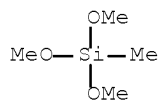
CM 6

August 10, 2010

10/559,810

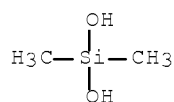
8

CRN 1185-55-3  
CMF C4 H12 O3 Si



CM 7

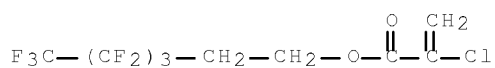
CRN 1066-42-8  
CMF C2 H8 O2 Si



RN 956012-04-7 HCAPLUS  
CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with 1,1-dimethylsilanediol, octadecyl 2-propenoate and  
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

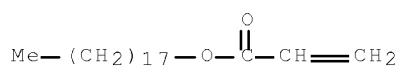
CM 1

CRN 701909-41-3  
CMF C9 H6 Cl F9 O2



CM 2

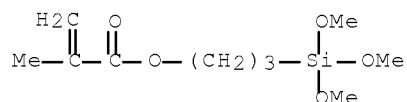
CRN 4813-57-4  
CMF C21 H40 O2



CM 3

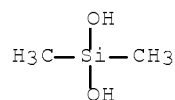


CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 4

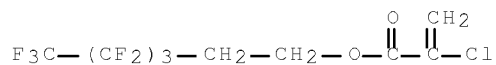
CRN 1066-42-8  
CMF C2 H8 O2 Si



RN 956012-05-8 HCAPLUS  
CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with 1,1-dimethylsilanediol, octadecyl 2-propenoate,  
triethoxyoctylsilane and 3-(trimethoxysilyl)propyl  
2-methyl-2-propenoate (CA INDEX NAME)

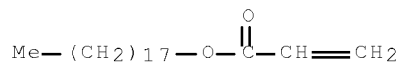
CM 1

CRN 701909-41-3  
CMF C9 H6 Cl F9 O2



CM 2

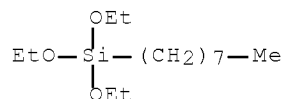
CRN 4813-57-4  
CMF C21 H40 O2



CM 3

CRN 2943-75-1

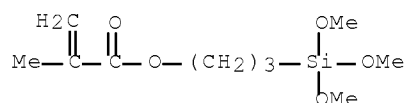
CMF C14 H32 O3 Si



CM 4

CRN 2530-85-0

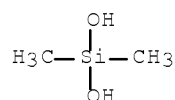
CMF C10 H20 O5 Si



CM 5

CRN 1066-42-8

CMF C2 H8 O2 Si



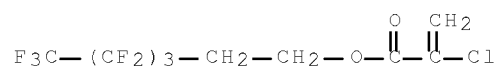
RN 956012-07-0 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with 1,1-dimethylsilanediol, octadecyl 2-propenoate,  
triethoxy(2-methylpropyl)silane and 3-(trimethoxysilyl)propyl  
2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 701909-41-3

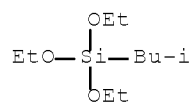
CMF C9 H6 Cl F9 O2



CM 2

CRN 17980-47-1

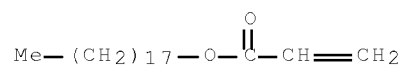
CMF C10 H24 O3 Si



CM 3

CRN 4813-57-4

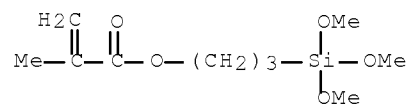
CMF C21 H40 O2



CM 4

CRN 2530-85-0

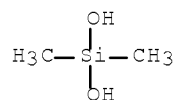
CMF C10 H20 O5 Si



CM 5

CRN 1066-42-8

CMF C2 H8 O2 Si



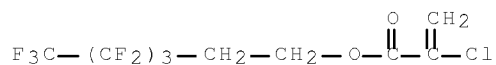
RN 956012-09-2 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with 1-butanol titanium(4+) salt (4:1), 1,1-dimethylsilanediol, octadecyl 2-propenoate, triethoxy(2-methylpropyl)silane, triethoxyoctylsilane, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 701909-41-3

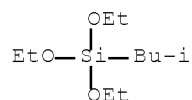
CMF C9 H6 Cl F9 O2



CM 2

CRN 17980-47-1

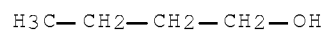
CMF C10 H24 O3 Si



CM 3

CRN 5593-70-4

CMF C4 H10 O . 1/4 Ti



● 1/4 Ti(IV)

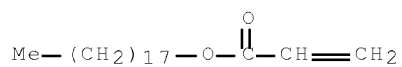
August 10, 2010

10/559,810

13

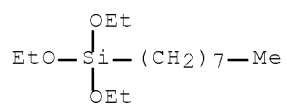
CM 4

CRN 4813-57-4  
CMF C21 H40 O2



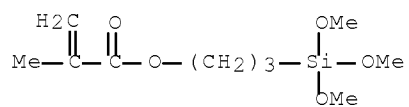
CM 5

CRN 2943-75-1  
CMF C14 H32 O3 Si



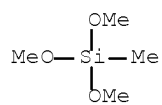
CM 6

CRN 2530-85-0  
CMF C10 H20 O5 Si



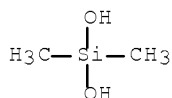
CM 7

CRN 1185-55-3  
CMF C4 H12 O3 Si



CM 8

CRN 1066-42-8  
CMF C2 H8 O2 Si



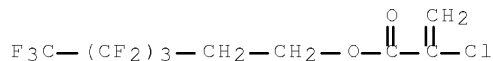
IT 956011-99-7P, Methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltrimethoxysilane-stearyl acrylate copolymer 956012-00-3DP, Isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer, reaction products with 2-butanol 956012-00-3P, Isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer 956012-01-4P, Isobutyltrimethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer 956012-03-6DP, Methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate copolymer, reaction products with C3-C6-aliphatic alcs. 956012-03-6P, Methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate copolymer (fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)

RN 956011-99-7 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with octadecyl 2-propenoate, trimethoxyoctylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

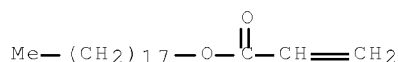
CM 1

CRN 701909-41-3  
CMF C9 H6 Cl F9 O2



CM 2

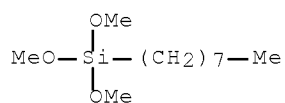
CRN 4813-57-4  
CMF C21 H40 O2



CM 3

CRN 3069-40-7

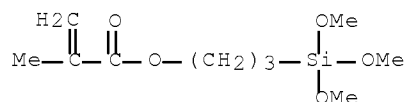
CMF C11 H26 O3 Si



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



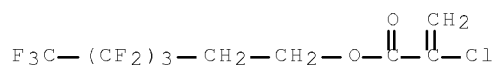
RN 956012-00-3 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with octadecyl 2-propenoate, triethoxy(2-methylpropyl)silane  
and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 701909-41-3

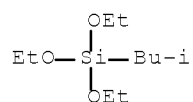
CMF C9 H6 Cl F9 O2



CM 2

CRN 17980-47-1

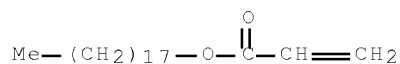
CMF C10 H24 O3 Si



CM 3

CRN 4813-57-4

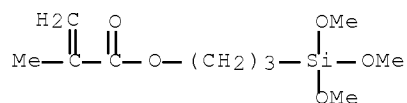
CMF C21 H40 O2



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



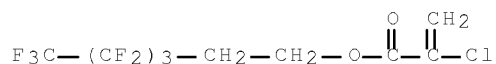
RN 956012-00-3 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with octadecyl 2-propenoate, triethoxy(2-methylpropyl)silane  
and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 701909-41-3

CMF C9 H6 Cl F9 O2

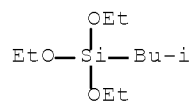


CM 2

CRN 17980-47-1

CMF C10 H24 O3 Si

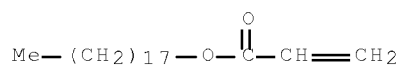




CM 3

CRN 4813-57-4

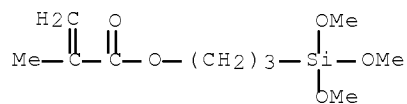
CMF C21 H40 O2



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



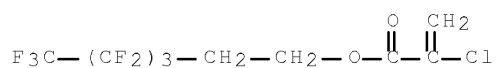
RN 956012-01-4 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with octadecyl 2-propenoate, trimethoxy(2-methylpropyl)silane  
and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 701909-41-3

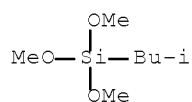
CMF C9 H6 Cl F9 O2



CM 2

CRN 18395-30-7

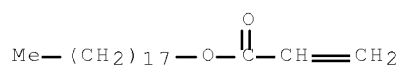
CMF C7 H18 O3 Si



CM 3

CRN 4813-57-4

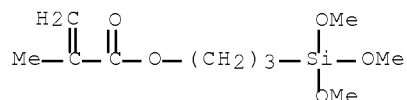
CMF C21 H40 O2



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



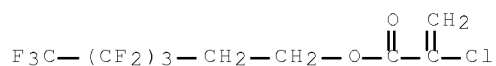
RN 956012-03-6 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with octadecyl 2-propenoate, triethoxyoctylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 701909-41-3

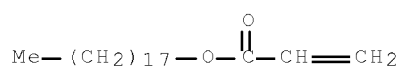
CMF C9 H6 Cl F9 O2



CM 2

CRN 4813-57-4

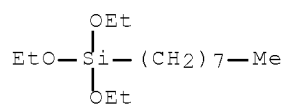
CMF C21 H40 O2



CM 3

CRN 2943-75-1

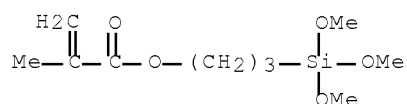
CMF C14 H32 O3 Si



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



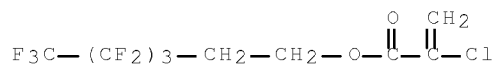
RN 956012-03-6 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester,  
polymer with octadecyl 2-propenoate, triethoxyoctylsilane and  
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

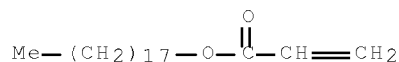
CRN 701909-41-3

CMF C9 H6 Cl F9 O2



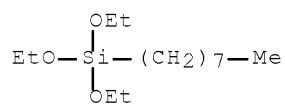
CM 2

CRN 4813-57-4  
CMF C21 H40 O2



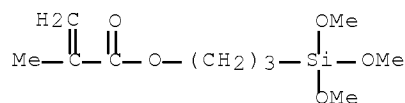
CM 3

CRN 2943-75-1  
CMF C14 H32 O3 Si



CM 4

CRN 2530-85-0  
CMF C10 H20 O5 Si



IPCI C04B0041-45 [I,C]; C04B0041-48 [I,A]; C04B0041-49 [I,A]; C09D0133-14 [I,C]; C09D0133-16 [I,A]; C09D0183-00 [I,C]; C09D0183-00 [I,A]  
IPCR C04B0041-45 [I,C]; C04B0041-48 [I,A]; C04B0041-49 [I,A]; C09D0133-14 [I,C]; C09D0133-16 [I,A]; C09D0183-00 [I,C]; C09D0183-00 [I,A]  
CC 42-7 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 58  
ST fluoroalkyl acrylate resin polysiloxane antistaining water resistant masonry coating  
IT Polysiloxanes  
(acrylic, fluorine-containing; fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)  
IT Fluoropolymers  
(acrylic-polysiloxane-; fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)  
IT Coating materials  
(antistaining; fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)

- IT Concrete  
Masonry  
(fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of)
- IT Coating process  
(fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)
- IT Coating materials  
(water-resistant; fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)
- IT 956012-02-5DP, Dimethylsilanediol-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate-titanium tetrabutoxide copolymer, reaction products with 2-butanol 956012-02-5P,  
Dimethylsilanediol-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate-titanium tetrabutoxide copolymer 956012-04-7P,  
Dimethylsilanediol-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer 956012-05-8DP,  
Dimethylsilanediol-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate copolymer, reaction products with 2-butanol 956012-07-0DP,  
Dimethylsilanediol-isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer, reaction products with 2-butanol 956012-09-2DP,  
Dimethylsilanediol-isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-methyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate-titanium tetrabutoxide copolymer, reaction products with 2-butanol  
(comprised of actual and assumed monomers; fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)
- IT 67-63-0DP, Isopropanol, reaction products with acrylic polysiloxanes  
71-36-3DP, 1-Butanol, reaction products with acrylic polysiloxanes  
78-92-2DP, 2-Butanol, reaction products with acrylic polysiloxanes  
25917-35-5DP, Hexanol, reaction products with acrylic polysiloxanes  
30899-19-5DP, Pentanol, reaction products with acrylic polysiloxanes  
956011-99-7P, Methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltrimethoxysilane-stearyl acrylate copolymer 956012-00-3DP,  
Isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer, reaction products with 2-butanol 956012-00-3P,  
Isobutyltriethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer 956012-01-4P,  
Isobutyltrimethoxysilane-methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-stearyl acrylate copolymer 956012-03-6DP,  
Methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate copolymer, reaction products with C3-C6-aliphatic alcs. 956012-03-6P,  
Methacryloxypropyltrimethoxysilane-nonafluorohexyl chloroacrylate-octyltriethoxysilane-stearyl acrylate copolymer  
(fluorine-containing acrylic polymer and siloxane compns. for waterproofing and stainproofing of masonry)

## RECORD (3 CITINGS)

L25 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2007:1173621 HCAPLUS Full-text  
 DOCUMENT NUMBER: 147:474303  
 TITLE: Cosmetic film-forming agents containing  
 fluoroacrylate polymers, cosmetics containing  
 them, and cosmetic powders coated with them  
 INVENTOR(S): Yamamoto, Ikuo; Masutani, Tetsuya  
 PATENT ASSIGNEE(S): Daikin Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007269642	A	20071018	JP 2006-93816	20060330
PRIORITY APPLN. INFO.:			JP 2006-93816	20060330

AB The cosmetic film-forming agents contain polymers having repeating units formed from fluoroacrylates CH<sub>2</sub>:CXCOARf [X = F, Cl, Br, I, CF<sub>X1</sub>X<sub>2</sub> (X<sub>1</sub>, X<sub>2</sub> = H, F, Cl), cyano, Cl-20 linear or branched fluoroalkyl, (un)substituted benzyl, (un)substituted phenyl; A = OY<sub>1</sub> [Y<sub>1</sub> = Cl-10 aliphatic group, C<sub>6</sub>-10 aromatic or alicyclic group, CH<sub>2</sub>CH<sub>2</sub>NR<sub>1</sub>SO<sub>2</sub>(CH<sub>2</sub>CH<sub>2</sub>)<sub>a</sub> (R<sub>1</sub> = Cl-4 alkyl; a = 0, 1), CH<sub>2</sub>CH(OR<sub>11</sub>)CH<sub>2</sub> (R<sub>11</sub> = H, Ac), (CH<sub>2</sub>)<sub>n</sub>SO<sub>2</sub> (n = 1-10)], Y<sub>2</sub>[(CH<sub>2</sub>)<sub>m</sub>Z]<sub>p</sub>(CH<sub>2</sub>)<sub>n</sub> (Y<sub>2</sub> = O, NH; Z = S, SO<sub>2</sub>; m = 1-10; n = 0-10; p = 0, 1); R<sub>f</sub> = Cl-6 linear or branched perfluoroalkyl]. CH<sub>2</sub>:CClCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>C<sub>4</sub>F<sub>9</sub> was copolymd. with Silaplane FM 0721 (silicone macromonomer) in the presence of Perbutyl PV (tert-Bu peroxyypivalate) to give a copolymer. A cyclosilicone solution containing 20 weight% of the copolymer was cast on a polyester film to form a water-resistant, water- and oil-repellent film showing water contact angle 110-130° and n-hexadecane contact angle 70-89°. A cosmetic powdery foundation containing mixed powders 89.8, p-hydroxybenzoic acid ester 0.1, the cyclosilicone solution of the fluoro copolymer 10.0, and perfume 0.1 weight% showed good water resistance and skin feel.

IT 952579-32-7P  
 (comprised of actual and assumed monomers; water- and oil-repellent film-forming fluoroacrylate copolymers for cosmetics and cosmetic powder coating)

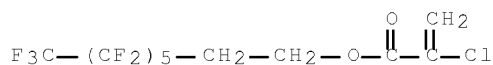
RN 952579-32-7 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester, polymer with butyl 2-propenoate and 1,1-dimethylsilanediol, graft (CA INDEX NAME)

CM 1

CRN 96383-55-0

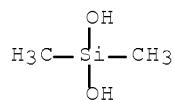
CMF C11 H6 Cl F13 O2



CM 2

CRN 1066-42-8

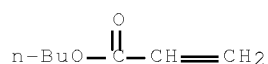
CMF C2 H8 O2 Si



CM 3

CRN 141-32-2

CMF C7 H12 O2



IT 952579-31-6P

(water- and oil-repellent film-forming fluoroacrylate copolymers  
for cosmetics and cosmetic powder coating)

RN 952579-31-6 HCAPLUS

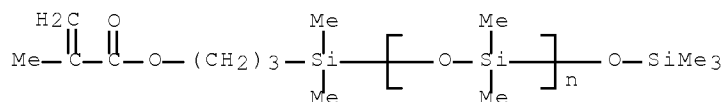
CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,7,7,8,8,8-  
tridecafluorooctyl ester, polymer with butyl 2-propenoate and  
 $\alpha$ -[dimethyl[3-[(2-methyl-1-oxo-2-propen-1-yl)oxy]propyl]silyl]-  
 $\omega$ -[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)], graft (CA  
INDEX NAME)

CM 1

CRN 123109-42-2

CMF (C2 H6 O Si)<sub>n</sub> C12 H26 O3 Si2

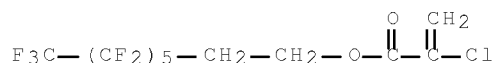
CCI PMS



CM 2

CRN 96383-55-0

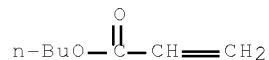
CMF C11 H6 Cl F13 O2



CM 3

CRN 141-32-2

CMF C7 H12 O2



IPCI A61K0008-81 [I,A]; A61K0008-72 [I,C\*]; A61Q0001-02 [I,A]; A61Q0001-12 [I,A]; A61Q0001-10 [I,A]; A61Q0017-04 [I,A]; A61Q0005-12 [I,A]; A61Q0003-02 [I,A]; A61Q0001-04 [I,A]; A61Q0005-06 [I,A]

IPCR A61K0008-72 [I,C]; A61K0008-81 [I,A]; A61Q0001-02 [I,C]; A61Q0001-02 [I,A]; A61Q0001-04 [I,A]; A61Q0001-10 [I,A]; A61Q0001-12 [I,C]; A61Q0001-12 [I,A]; A61Q0003-02 [I,C]; A61Q0003-02 [I,A]; A61Q0005-06 [I,C]; A61Q0005-06 [I,A]; A61Q0005-12 [I,C]; A61Q0005-12 [I,A]; A61Q0017-04 [I,C]; A61Q0017-04 [I,A]

CC 62-4 (Essential Oils and Cosmetics)  
Section cross-reference(s): 37

IT 952579-19-0P 952579-21-4P 952579-23-6P 952579-26-9P  
952579-28-1P ~~952579-32-7P~~ 952579-34-9P  
(comprised of actual and assumed monomers; water- and oil-repellent film-forming fluoroacrylate copolymers for cosmetics and cosmetic powder coating)

IT 149925-73-5DP, Silaplane FM 0721, polymers with fluoroacrylate monomer and urethane monomer 701909-41-3DP, polymers with methacrylate-terminated silicone macromonomer and urethane monomer  
952579-18-9P 952579-20-3P 952579-22-5P 952579-25-8P  
952579-27-0P 952579-29-2P 952579-30-5P ~~952579-31-6P~~  
952579-33-8P  
(water- and oil-repellent film-forming fluoroacrylate copolymers for cosmetics and cosmetic powder coating)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L25 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2006:1206624 HCAPLUS Full-text

DOCUMENT NUMBER: 145:506309

TITLE: Fluorosilicones and fluorine- and silicon-containing surface treatment agent

INVENTOR(S): Yamamoto, Ikuo; Minami, Shinichi; Masutani, Tetsuya; Hupfield, Peter C.; Surgenor, Avril E.

PATENT ASSIGNEE(S): Daikin Industries, Ltd., Japan; Dow Corning Corporation

SOURCE: PCT Int. Appl., 70pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2



## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006121171	A1	20061116	WO 2006-JP309609	20060508
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
CA 2607627	A1	20061116	CA 2006-2607627	20060508
EP 1899392	A1	20080319	EP 2006-746356	20060508
EP 1899392	B1	20100609		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2008542449	T	20081127	JP 2007-551887	20060508
BR 2006008792	A2	20100126	BR 2006-8792	20060508
AT 470685	T	20100615	AT 2006-746356	20060508
US 20090030143	A1	20090129	US 2007-913814	20071107
MX 2007014071	A	20080207	MX 2007-14071	20071109
CN 101171274	A	20080430	CN 2006-80015871	20071109
KR 2008008409	A	20080123	KR 2007-728631	20071207
KR 952519	B1	20100412		
IN 2007CN05668	A	20080328	IN 2007-CN5668	20071210
PRIORITY APPLN. INFO.:				
			US 2005-679150P	P 20050509
			US 2005-711335P	P 20050825
			WO 2006-JP309609	W 20060508

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A fluorosilicone reaction product of a mercapto functional organopolysiloxane and a fluorine-containing monomer, and methods of preparing the fluorosilicone are disclosed. The fluorosilicone products are suitable for application to substrates such as textiles, particularly fabrics, to impart water or oil repellent properties to the textile. The fluorosilicone reaction product is prepared from (A) a fluorine-containing monomer of the formula  $\text{CH}_2=\text{C}(\text{X})\text{COOYRf}$ , and (B) a mercapto functional organopolysiloxane.

IT 914920-51-7P

(comprised of actual and assumed monomers; fluorosilicones and fluorine- and silicon-containing surface treatment agent)

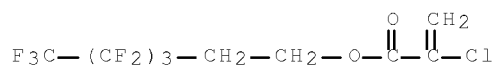
RN 914920-51-7 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with 3-chloro-2-hydroxypropyl 2-methyl-2-propenoate, 3-(diethoxymethylsilyl)-1-propanamine, 3-(dimethoxymethylsilyl)-1-propanethiol, dimethylsilanediol, N-(hydroxymethyl)-2-propenamide and octadecyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 701909-41-3

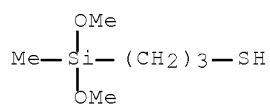
CMF C9 H6 C1 F9 O2



CM 2

CRN 31001-77-1

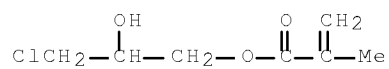
CMF C6 H16 O2 S Si



CM 3

CRN 13159-52-9

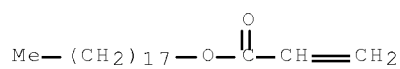
CMF C7 H11 Cl O3



CM 4

CRN 4813-57-4

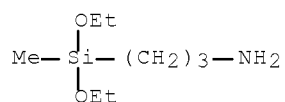
CMF C21 H40 O2



CM 5

CRN 3179-76-8

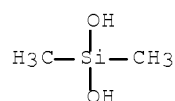
CMF C8 H21 N O2 Si



CM 6

CRN 1066-42-8

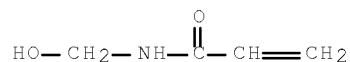
CMF C2 H8 O2 Si



CM 7

CRN 924-42-5

CMF C4 H7 N O2



IPCI C08F0283-12 [I,A]; C08F0283-00 [I,C\*]; C08G0077-28 [I,A]; C08G0077-00 [I,C\*]; D06M0015-19 [I,A]; D06M0015-643 [I,A]; D06M0015-37 [I,C\*]

IPCR C08F0283-00 [I,C]; C08F0283-12 [I,A]; C08G0077-00 [I,C]; C08G0077-28 [I,A]; D06M0015-19 [I,C]; D06M0015-19 [I,A]; D06M0015-37 [I,C]; D06M0015-643 [I,A]

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 40

IT ~~914920-51-7F~~ 914920-53-9P

(comprised of actual and assumed monomers; fluorosilicones and fluorine- and silicon-containing surface treatment agent)

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Minnesota Mining And Ma	2000			EP 0994134 A	HCAPLUS
Ohata	1991			US 4987180 A	HCAPLUS
Shin-Etsu Chemical Co L	2002			EP 1217119 A	HCAPLUS
Westall	1984			US 4448810 A	HCAPLUS

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L25 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2004:1080947 HCAPLUS Full-text

August 10, 2010

10/559,810

28

DOCUMENT NUMBER: 142:61284  
 TITLE: Fluoropolymeric water- and oil-repellent  
 masonry treating agents  
 INVENTOR(S): Ueda, Akihiko; Maeda, Masahiko  
 ; Fukuda, Teruyuki; Masutani,  
 Tetsuya  
 PATENT ASSIGNEE(S): Daikin Industries, Ltd., Japan  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004108779	A1	20041216	WO 2004-JP8243	20040607
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1640387	A1	20060329	EP 2004-736265	20040607
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
CN 1795216	A	20060628	CN 2004-80014400	20040607
CN 100374474	C	20080312		
JP 4305448	B2	20090729	JP 2005-506847	20040607
US 20070066780	A1	20070322	US 2006-559810	20060512
PRIORITY APPLN. INFO.:			JP 2003-163462	A 20030609
			WO 2004-JP8243	W 20040607

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

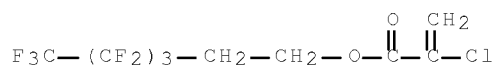
AB A fluoropolymer for masonry treatment produced from (A) a fluoromonomer, (Rf)(Y)OC(:O)C(X):CH<sub>2</sub> which has been substituted in the  $\alpha$ -position by a group X, wherein X = F, Cl, Br, I, CFX<sub>1</sub>X<sub>2</sub> (wherein X<sub>1</sub> and X<sub>2</sub> = H, F, Cl, Br, or I), cyano, C1-20 linear or branched fluoroalkyl, benzyl derivative, or Ph derivative; Y = C1-10 aliphatic, C6-10 aromatic or cycloaliph., -CH<sub>2</sub>CH<sub>2</sub>N(R<sub>1</sub>)SO<sub>2</sub>- (wherein R<sub>1</sub> = C1-4 alkyl), or -CH<sub>2</sub>CH(IY<sub>1</sub>)CH<sub>2</sub>- (wherein Y<sub>1</sub> = H or acetyl); Rf = C1-20 linear or branched fluoroalkyl or fluoroalkenyl or -(C<sub>3</sub>F<sub>6</sub>O)<sub>n</sub>-, -(C<sub>2</sub>F<sub>4</sub>O)<sub>n</sub>-, or -(CF<sub>2</sub>O)<sub>n</sub>- wherein n = 1-200 and (B) a monomer having a functional group reactive with active hydrogen. It imparts excellent water- and-oil repellency and insusceptibility to fouling to masonries.

IT 808753-73-3P  
 (fluoropolymeric water- and oil-repellent masonry treating agents)

RN 808753-73-3 HCAPLUS

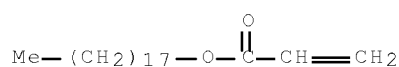
CN 2-Propenoic acid, 2-chloro-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester, polymer with octadecyl 2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (CA INDEX NAME)

CRN 701909-41-3  
CMF C9 H6 Cl F9 O2



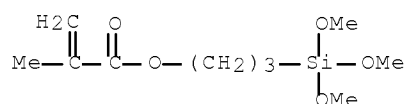
CM 2

CRN 4813-57-4  
CMF C21 H40 O2



CM 3

CRN 2530-85-0  
CMF C10 H20 O5 Si



IPCI C08F0220-22 [ICM,7]; C08F0220-00 [ICM,7,C\*]; C08L0033-14 [ICS,7];  
C08L0033-00 [ICS,7,C\*]; C04B0041-46 [ICS,7]; C04B0041-45 [ICS,7,C\*]  
IPCR C04B0041-45 [I,C\*]; C04B0041-48 [I,A]; C08F0220-00 [I,C\*]; C08F0220-24  
[I,A]  
CC 58-3 (Cement, Concrete, and Related Building Materials)  
Section cross-reference(s): 35  
ST **masonry** fluoropolymer treating agent water oil repellent  
antifouling  
IT **Masonry**  
(fluoropolymeric water- and oil-repellent **masonry**  
treating agents)  
IT Limestone, processes  
(fluoropolymeric water- and oil-repellent **masonry**  
treating agents)  
IT Fluoropolymers, uses  
(fluoropolymeric water- and oil-repellent **masonry**  
treating agents)  
IT Granite, processes  
(polished; fluoropolymeric water- and oil-repellent **masonry**  
treating agents)

IT Oil-resistant materials  
 Water-resistant materials  
 (treating agents for masonry; fluoropolymeric water- and  
 oil-repellent masonry treating agents)  
 IT 808753-73-3P 808753-74-4P  
 (fluoropolymeric water- and oil-repellent masonry  
 treating agents)

## RETABLE

Referenced Author (RAU)	Year   (RPY)	VOL   (RVL)	PG   (RPG)	Referenced Work   (RWK)	Referenced   File
Daikin Industries Ltd	1988			EP 0247489 B1	HCAPLUS
Daikin Industries Ltd	1988			EP 0247489 B1	HCAPLUS
Daikin Industries Ltd	1988			US 5021501 A	HCAPLUS
Daikin Industries Ltd	1988			US 5021501 A	HCAPLUS
Daikin Industries Ltd	1988			US 5021527 A	HCAPLUS
Daikin Industries Ltd	1988			US 5021527 A	HCAPLUS
Daikin Industries Ltd	1988			JP 63-090588 A	HCAPLUS
Daikin Industries Ltd	1988			JP 63-099285 A	HCAPLUS
Daikin Industries Ltd	1989			JP 01-315471 A	HCAPLUS
Daikin Industries Ltd	1989			EP 0333083 A3	HCAPLUS
Daikin Industries Ltd	1989			US 5069941 A	HCAPLUS
Daikin Industries Ltd	2000			JP 2000264757 A	HCAPLUS
Dainippon Ink And Chemi	2003			JP 2003154307 A	HCAPLUS
Minnesota Mining & Mfg	1999			EP 0832051 A1	HCAPLUS
Minnesota Mining & Mfg	1999			JP 11-507687 A	
Minnesota Mining & Mfg	1999			WO 1997000230 A1	
Minnesota Mining & Mfg	1999			US 6037429 A	HCAPLUS
Shin-Etsu Chemical Co L	1995			JP 07-109317 A	HCAPLUS

L25 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1992:13289 HCAPLUS Full-text

DOCUMENT NUMBER: 116:13289

ORIGINAL REFERENCE NO.: 116:2291a,2294a

TITLE: Coated carriers for developing electrostatic  
imagesINVENTOR(S): Kubo, Motonobu; Inukai, Hiroshi; Kitahara,  
Takahiro

PATENT ASSIGNEE(S): Daikin Industries, Ltd., Japan

SOURCE: U.S., 16 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5021316	A	19910604	US 1989-418155	19891006
JP 02099974	A	19900411	JP 1988-253576	19881006
JP 02103562	A	19900416	JP 1988-258906	19881013
JP 02168274	A	19900628	JP 1988-324486	19881221
JP 02280171	A	19901116	JP 1989-101475	19890420
JP 03135579	A	19910610	JP 1989-208925	19890811
US 5071725	A	19911210	US 1990-627359	19901214
PRIORITY APPLN. INFO.:			JP 1988-253576	A 19881006
			JP 1988-258906	A 19881013
			JP 1988-324486	A 19881221

JP 1989-101475 A 19890420

JP 1989-208925 A 19890811

US 1989-418155 A3 19891006

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The title carrier comprises a core coated with a copolymer from CH<sub>2</sub>:CR<sub>1</sub>CO<sub>2</sub>R 50-99 weight% and CH<sub>2</sub>:CR<sub>2</sub>CO<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>SiMem(OR<sub>3</sub>)<sub>3-m</sub> 1-50 weight% [R<sub>1</sub> = H, F, Cl, Me; R = fluoroalkyl; R<sub>2</sub> = R<sub>1</sub>; R<sub>3</sub> = Me, Et, Pr, methoxyethyl, acetyl; m = 0-2; n = 1-4]. The carriers can impart a large quantity of charge to the toner and have excellent durability.

IT 138004-01-0

(electrostatog. carrier coating from)

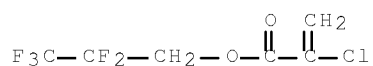
RN 138004-01-0 HCAPLUS

CN 2-Propenoic acid, 2-chloro-, 2,2,3,3,3-pentafluoropropyl ester, polymer with methyl 2-propenoate and (trimethoxysilyl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 74359-16-3

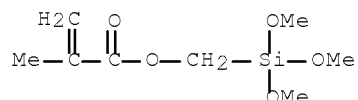
CMF C6 H4 Cl F5 O2



CM 2

CRN 54586-78-6

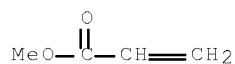
CMF C8 H16 O5 Si



CM 3

CRN 96-33-3

CMF C4 H6 O2



INCL 430108000

IPCI G03G0009-13 [ICM,5]; G03G0009-12 [ICM,5,C\*]

IPCR G03G0009-113 [I,C\*]; G03G0009-113 [I,A]

NCL 430/111.100; 428/407.000

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

IT 101216-40-4 110226-64-7 129703-99-7 129863-20-3 129879-30-7

131630-62-1 138003-98-2 138003-99-3 138004-00-9

~~138004-01-0~~ 138004-02-1 138004-03-2 138024-74-5

(electrostatog. carrier coating from)

RETABLE

Referenced Author (RAU)	Year   (RPY)	VOL   (RVL)	PG   (RPG)	Referenced Work   (RWK)	Referenced   File
----------------------------	-----------------	----------------	---------------	----------------------------	----------------------

Anon				EP 0362858 A2	HCAPLUS
Anon				US 4614700 A	HCAPLUS
Anon				US 4954409 A	HCAPLUS
Anon				US 4965159 A	HCAPLUS
Anon				JP 59223459 A	HCAPLUS
Anon				JP 61120169 A	HCAPLUS
Anon				JP 61120170 A	HCAPLUS

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD (1 CITINGS)